

## **NATURE AND EXTENT OF INCOME DIVERSIFICATION: A STUDY OF RURAL HOUSEHOLDS IN ASSAM**

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### **ABSTRACT**

Examining the nature and extent of income diversification among 332 rural households in a less developed area of Assam, this study found that both farm and nonfarm activities had been the common sources of income. But the non farm sector became the major source of income contributing 69.42 percent of total household income compared to 21.72 percent contributed by the farm sector. The mean income of the households participating in farm sector was far less than the mean income of households participating in nonfarm sector. This suggested unremunerative character of farming as a source of income and emergence of RNF sector as an alternative avenue of employment. . The rural nonfarm wage income dominated over the self employed income for all land groups. Remittance also appeared as an important source for all land class. The larger share of remittances for small and large land holders indicated that migration was a distress driven for small landholders while it was a positive choice for large land holders. Analysing income sources by income quartiles further revealed that the poor households were tagged with less productive farm sector while the rich households were taking up more rewarding nonfarm sector. Measuring the extent of diversification in terms of number of income sources and simpson's diversity index the paper found the existence of a significant difference in diversity among different household groups based on land and income status.

**KEYWORDS:** RNF, Income Diversity, Simpson's Index

### **1. INTRODUCTION**

The economic transformation both at the national and state level has been visible over the last couple of decades where the share of agriculture in GDP has declined and that of secondary and tertiary sectors has gone up. At the national level, the share of agriculture in GDP at factor cost at constant prices has declined from 34.9 percent to 16 percent in 2013-14 while the combined share of secondary and tertiary sectors has gone up from 65 percent to 84 percent. The same trend has been observed for Assam, albeit the rate of change is at lower level. Corresponding to this economic diversification at the macro level, there has been a livelihood diversification at the micro or household level where people accommodate themselves to cope with changing circumstances. Livelihood diversification at the rural household level implies a process where household members are engaged in different types of activities to build up household total income. According to Ellis (2000) it is a process by which rural household construct diverse portfolios of activities and assets in order to survive and to improve their standard of living.

Diversity of income sources is a norm rather than an exception. Different members or the same member of the household are engaged in diverse types of activities to generate income either to mitigate risk and shock arising out of uncertainties (Reardon et al., 1992; Bryceson 1996; Barret et al., 2001) or to achieve a higher standard of living. The

motivating factors behind diversification could be classified as push factors such as environmental risks and falling income, and pull factors, such as changing terms of trade or perceptions of improved opportunities (Hussein and Nelson, 1998). While households driven by distress push incentives are passively pushed into diversification, households in which demand pull incentives dominate, actively choose to access additional income sources in order to fulfill higher consumption need wishes (Moller and Buchenrieder, 2005). Poor households with lower asset endowment and limited risk bearing capacities take up activities that are only little remunerative, often even menial and exploitative and generate only a marginal additional income (Barret and Reardon, 2000). Asset richer households are able to take up activities that enable further capital accumulation and re-investment in the farm or non-farm sector.

Farming has been the traditional source of income for most of the rural households. But many household members, particularly the newly emerging educated and skilled youths, are not interested to this sector because of its unproductive nature due to changing climatic condition and institutional factors. These family members seek engagement in some form of self employed or wage employed activities in non-farm sector. Various empirical studies made all over the world have pointed out the importance of NFS as a major source of employment and income for rural households. Reardon et al (1998) find an average nonfarm income share of 42 percent in Africa followed by 40 percent in Latin America, 32 percent in Asia. In Bangladesh, the share of nonagricultural in rural household income has grown from 36.7 percent in 1982 to 54 percent in 2000 (Hossain, 2004). In India, the importance of NFS as a source of income is revealed by studies made by Venkateswarlu (2005) in Andhra Pradesh, Vatta and Sidhu (2007) in Punjab, Bhakar et al (2007) in Chhattisgarh, Micevska and Rahut (2008) in the Himalayan region to name a few.

Amid this growing importance of NFS in rural area, this paper explores the nature and extent of income diversification in a less developed area of Assam. In particular, research objective has been boiled down to the following research questions-

- What are the different activities or sources of income that rural households engaged in?
- How much of income originates from each source?
- What is the nature and extent of diversification measured in terms of diversity index?

The rest of the paper is organized as follows- the next section describes sources of data and methodologies employed in the study. Section 3 explains the nature of income diversification. The extent of diversification is discussed in section 4. Section 5 summarizes the study with concluding remarks and policy implications.

## 2. SOURCES OF DATA AND METHODOLOGY

The empirical study has been conducted in a less developed area of Assam comprising two districts, viz, Darrang and Udalguri. The primary data have been collected from 332 households selected through a multistage random sampling technique. At the first stage two blocks from each district were selected randomly. In the next stage three villages from each block were selected by using the random sampling procedure. At the final stage eight to ten percent of the total households were randomly selected. In order to capture heterogeneous economic condition a few household from each village were purposively selected based on housing status. The households were categorized into five groups based on ownership of land, viz, landless, marginal (upto 1.0 ha), small (>1.0 to 2.0 ha), medium (>2.0 to 4.0 ha) and large (>4.0 ha)

The data were collected using predesigned questionnaire by the personal interview method. The information was

collected on demographic characteristics, allocation of labour, income sources, level of income, employment status, asset status etc. The data were collected during the month of April to June 2013 with reference period of one year, i.e., 2012-13.

The data have been analysed by using simple statistical tools like tables, frequencies, percentages, means, standard deviation etc. To measure income diversity as number of income sources and balance among them we use Simpson Index of Diversity (SID). The SID is defined as

$SID = 1 - \sum p_i^2$ , where  $p_i$  is the proportion of household income derived from  $i$ th source. The value of SID ranges from 0 to 1 with  $SID = 0$  implying no diversification and as SID approaches 1 it implies higher degree of diversification.

### 3. NATURE OF INCOME DIVERSIFICATION

This section examines the nature and pattern of income diversification by exploring the households' income sources and amount of income derived from each source. The present study has classified sources of income into seven categories falling under three main heads, namely, farm income, nonfarm income and unearned income. The detail break up of each is as follows.

I Farm income include the following

- Crop income: The crop income is estimated by multiplying total production of each of the various kharif, rabi, plantation and horticultural crops by their market prices less the cost on account of seeds, fertilizers, pesticides, irrigation charges, payment to hired labour etc.
- Livestock income: The various livestock products like milk, egg, meat and fish valued at market prices by deducting average cost of production yield the livestock income.
- Agricultural labour income: It is the income received by household members from work on another person's land for wages.

II. Non Farm Income comprises the following

- Non farm self employment income: It is the net proceeds of any trade, profession or manufacturing activities of household members after accounting for costs such as expenditures on raw materials, energy, labour, and maintenance.
- 5. Nonfarm wage employment income: It is the income received by the household members staying at home as wages or salaries from non-farm wage employment either as a regular or casual employee.
- 6. Remittances: Any member of a household may work in nonfarm self employment or wage employment activities by staying away from home. The net income received by such member after deducting cost of staying constitutes remittances.
- Unearned income: Unearned income is the income obtained by the household without any corresponding economic activities. It includes rent, pension received by retired employee or old age pension.

Table 1 depicts the number of households engaged in various sources of income in the study area. Agriculture being the dominant source of rural economy, about 86 percent of the households are engaged in farming. Within the farm sector, largest numbers of households with 77percent of total households derive some income from livestock. This is because almost every household in rural area own some sort of livestock assets like cow, goat, pig, hen, duck, pigeons etc. About 60 percent households derive income from cropping. Even agricultural wage labour constitutes an important source

of income with one-third of the households engaged in this activity. This reflects poor status of almost 30 percent rural households.

**Table1: Income Sources of Sample Households**

Sources of Income	Number of Households	Percent Households
I. Farm income	286	86.14
1.Crop income	227	68.37
2. Livestock income	256	77.11
3. Agricultural labour income	100	30.12
II.Non farm income	265	79.82
4. Nonfarm self employment income	151	45.48
5. Nonfarm wage employment income	129	38.86
6.Remittances	74	22.29
III.7.Unearned income	140	42.17

**Source:** Authors' calculation from survey data

The most revealing fact indicated by the data is that about 80 percent of the rural households are engaged in NFS. Within this sector nonfarm self employment contributes income to 45.48 percent households and nonfarm wage employment contributes for the income of 38.86 percent households. 22.29 percent households derive some amount of income from remittances implying growing importance of migration from rural to urban areas in search of employment. Unearned income is also an important source of income of rural households with 42.17 percent households earning income from this source. This indicates importance of pension received by the households as a source of income either on account of retired govt employee or of the benefits derived by some family member from old age pension scheme initiated by the govt.

Although rural households derive income from multiple sources, all sources are not equally important. A rural household may be largely dependent on a particular source of income (Vatta and Garg, 2008). That source is called the major source of income. Table 2 shows the distribution of sampled households by major source of income. This gives a clearer picture of importance of a particular source of income.

**Table 2: Distribution of Household in Terms of Major Source of Income**

Major Source of Income	Percentage of Households
1.Crop income	
2. Livestock income	16.00
3. Agricultural labour income	2.4
4.Rural nonfarm self employment income	13.3
5.Rural nonfarm wage employment income	27.4
6.Remittances	25.9
7.Unearned income	10.5
	4.5

**Source:** Authors' calculation from survey data.

While farming is the main activity of the sampled households, it is not the major source of income for larger proportion of households. Only 31.7 percent of the households had farming as the major source of income. Out of that 16 percent households derive majority of income from crop production and 13.3 percent from agricultural labour. A small proportion of households, ie, 2.4 percent had also livestock as the major source of income. This reflects the growing

number of broiler and piggery farm as a source of livelihood in the village area. Contrary to this, 63.6 percent households derive larger proportion of income from non-farm activities including remittances. It is the rural nonfarm self employed activities that appeared to be the major source of income for 27.4 percent households followed by rural nonfarm wage employment for 25.9 percent households and remittances for 10.5 percent households. Even unearned income constitutes major source for 4.5 percent households. The disparity between farm and nonfarm activities as a major source of income indicates the fact that while farming has become unremunerative, RNFS has been more attractive avenues of employment for rural households.

The productivity and complex nature of various sources of income will be clearer from average income received by households from each source.

**Table 3: Households Income by Sources**

Source of Income Income from That Source	Average	Percent Share in Total	Mean Among Households With
1.Crop income			
2.Livestock income			
3.Agricultural labour income	18659.94		
Total Farm Income	14701.20	10.33	27291.19
4.RNF self employed	5885.54	8.14	19065.63
income	39246.69	3.25	19540
5.RNF wage employed	41463.55	21.72	45559.09
income	59157.23	22.95	91164.90
6. Remittances	24808.73	32.74	152249.61
Total NF income	125429.32	13.73	111304.05
7. Unearned income	16004.22	69.42	157141.89
Total income	180680.42	8.86	37952.86
Per Capita Income	35802.21		

**Source:** Authors' calculation from survey data.

The extent of income earned by rural households from different sources is presented in table 3. The average income of a rural household per annum is estimated at Rs.180680.42 with PCI estimated at Rs. 35802.21.As per the estimate of economic survey, PCI in the state stood at Rs40, 475 in 2012-13. Our estimate is at par with the estimate of economic survey. This difference may be attributed to two facts. First, rural per capita income is bound to be less than the PCI of the state as a whole. Second. As the study area is less developed naturally PCI will also be less .The total farm income constitutes 21.72 percent of total household income.This is also in consonance with the estimate at the state level where agriculture contributes 21 percent of income to state NSDP.The RNF sector contributes 69.42 percent of total household income. This shows the importance of this sector in rural economy. It is the RNF wage employed income which contributes highest in total households income with its share of 32.74 percent, followed by RNF self employed income with 22.95 percent. Even remittances constitute 13.73 percent of household income. The unearned income share is 8.86 percent.

The mean income of the household participating in a particular source of income reflects its productivity. The mean income of household participating in farm sector is far less than the mean income of nonfarm sector. This shows unremunerative nature of agriculture and its allied activities and swing of household members towards the non farm sector.

The growing importance of rural non farm economy calls for a close look at various sectors where non farm income originates. Following the National Industrial Classification (NIC) adopted by the NSSO, it is observed from table 4 that CSP services contribute the highest percent (61.99) to total household income. This is because most of wage employed persons are engaged in this sector. Trade, hotels and restaurants are another important areas of engagement which contribute 20.80 percent of household income. Construction, transport and communication jointly contribute 11 percent to total household income. It further reveals that manufacturing, utilities, and finance, insurance and real estates are not well developed in the study area as each of these sector contribute only around 2 percent income.

**Table 4: Distribution of Non Farm Income among Various Nonfarm Subsectors in Study Area'**

Industry/ NIC Sector	Average Annual Income (Rs. /household)	Percent of RNF Income
1.Manufacturing	3367.37	2.68
2.Utilities	2656.63	2.12
3.Construction	8253.01	6.58
4.Trade, hotels and restaurants	26088.25	20.80
5.Transport, storage and communication	5586.10	4.45
6.Finance, Insurance and Real Estate	2369.70	1.89
7. Community, social and personal services	77749.10	
<b>Total</b>	<b>125429.52</b>	<b>61.99</b>

**Source:** Authors' calculation from survey data.

An important aspect of diversity of income sources is to analyse whether there is any relationship between landholdings and income diversity. Though there is no concrete theoretical relation between the two, Hart (1994) said that large landowners diversify to accumulate while landless and small landholders diversify to survive. Table 5 shows the extent of income earned by different categories of households based on land ownership from various sources of income.

In table 5 households are classified into landless, marginal, small, medium and large based on land ownership. The landless, marginal and small farmers taken together constitute 83.8 percent farm households in study area. This corresponds to the figure of 83.35 percent at the state level estimated by the Agricultural census in 2000-01. The medium and large landholders constitute almost 15 percent rural households. It is observed from the table that share of crop income is directly related with the farm size while the share of non farm income is in negative correlation with farm size. The share of non farm income is the highest for landless households among all categories of households. This explains of the fact that landless households driving into nonfarm activities to supplement their meager farm income. Agricultural labour income is a major source of income for landless cultivators and share is decreasing with the size of land. Livestock income is an important source for marginal farmers, while for others it hovers around 4 to 7 percentage point.

However, the share of nonfarm income is larger than the share of farm income across all categories of rural households, reflecting that NFS is an important avenues of employment for all households. Within the nonfarm sector nonfarm wage employment income dominates over nonfarm self employment income for all categories of farm households, although their share is high for all households except the large land holders for whom nonfarm self employment income is significantly less. Remittance is also an important source of income for all households. But it is the small and large land holders whose share is large from remittance. This may be due to the fact that members with more land holdings are engaged in better paid jobs compared to the members of landless and marginal landholders who are engaged in low paid casual activities. Thus migration is a distress and push phenomenon for small land holders and a better

choice for large land owners. The share of unearned income is also an important source for all households except the landless. This is because landless earn no rental and pension income, while large landowners earn rental income from land and also handsome pension due to some family members retired from govt employment.

**Table 5: Sources of Household Income by Farm Size**

	Farm Size in Hectare				
	Landless	Marginal(<1h)	Small(1-2h)	Medium(2h-4h)	Large(4h>)
Number of households(%)	16.9	47.9	19	11.7	4.5
Average total income(RS)	84607	163,562	220,817	263,877	335,920
Share in total income (%)	16.35	21.94	17.91	22.68	34.22
Total farm income	2.04	5.85	10.91	15.33	29.40
Crop income	4.41	11.49	5.12	7.22	4.52
Livestock	9.90	4.60	1.88	0.13	0.3
Agricultural labour	83.06	69.48	69.85	69.96	54.54
Total nonfarm income	29.45	27.46	17.63	24.70	4.68
Nonfarm self employment	44.52	32.29	32.02	31.95	27.60
Nonfarm wage employed	9.09	9.73	20.20	13.31	22.26
Remittances	0.60	8.58	12.24	7.36	11.23
Unearned income					

**Source:** Authors' calculation from survey data.

The pattern of income sources and their importance among rural households is further analysed in terms of income quartiles constructed by ranking households by per capita income and then dividing the sample into quartiles containing equal number of households. Two reverse trends have been observed from the table 6. While the share of farm income or for that matter crop income has declined sharply, the share of non farm income rises progressively from the poorest to the richest quartile. This reflects the fact that the poor households are tagged with less productive farm sector while the richer households are driving towards more productive nonfarm activities. The share of crop income fell continuously with quartile groups from as high as 30.9 percent for the poorest quartile to as low as 3.71 percent for the richest quartile. The share of livestock income hovered around 8 percent except for the poorest quartile for whom it was 13.08 percent. The agricultural labour income declined sharply from 25.66 percent for the poorest class to 1.18 percent for the third quartile and almost nil for the richest class. The landless and marginal farmers being in the first two quartile groups usually resorted to agricultural wage labour given its low entry requirements in terms of skills, education and capital.

**Table 6: Sources of Income across Income Quartile Class**

	First Quartile	Second Quartile	Third Quartile	Fourth Quartile
Average total income	43,947	79,094	180,449	419,231
Share in total income (%)				
Total farm income	69.64	41.32	25.38	11.43
Crop income	30.90	19.88	16.51	3.71
Livestock	13.08	8.86	7.69	7.68
Agricultural labour	25.66	12.58	1.18	0.04
Total non farm income	28.28	54.24	66.64	77.80
Nonfarm self employed	16.27	33.08	30.83	18.38
Nonfarm wage employed	7.36	15.16	22.46	43.14
Remittance	4.65	6.00	13.35	16.31
Unearned income	2.09	4.44	7.99	10.78

**Source:** Authors' calculation from survey data

The nonfarm income remains an important source of income for all quartile classes. Even for the poorest class it accounts for one third of total income and for the other three quartiles it is more than 50 percent. Among the components of non farm income, nonfarm self-employment income dominates over the nonfarm wage employed income for all quartiles except the richest class for whom nonfarm wage income is more important. The richest households have the capacity to acquire education and skill required for engagement to more remunerative jobs. For the same logic migrated members of poorer households are absorbed in low paid casual employment while migrated members of richer households are employed in better paid regular employment. This is evident from progressively rising share of remittance income with quartile class, the poorest class earning 2.09 percent and the richest earning 10.78 percent. The share of unearned income also followed a [positive relation with the income quartiles ranging from 2.09 percent for the poorest class to 10.78 percent for the richest quartile.

#### 4. EXTENT OF DIVERSIFICATION

This section examines the extent of diversification based on income and land status of rural households in the study region. To start with, the number of income sources has been used as a simple measure of diversification. At the next stage we measure diversification in terms of Simpson's diversity index. This measure considers the number of sources as well as the balance among them. Both these measures are checked among the rural households depending on their income status and land holding.

##### 4.1 Income Status and Diversity

As mentioned earlier, households' income sources are categorized into seven sources. A household with more number of income sources is considered as highly diversified compared to a household with less number of income sources. The mean number of income sources is compared among different income groups as shown in the table 7.

It is seen from the table that on an average a rural household has 3.24 number of income sources and 75 percent households have more than three sources of income. This illustrates the phenomenon of diversification as a norms rather than an exception. Comparing the mean number of income sources among the income groups it is found that the number of income sources has been rising along with the income status. The lowest income group has an average 2.87 number of income sources as against the 3.42 number of income sources among the richest class. The mean difference is statistically significant at 1 percent level of significance.

**Table 7: Income Status and Number of Income Sources**

Income Group	Number of households	Number of sources			F Value	Significance
		Minimum	Maximum	Mean		
Lowest	83	1	5	2.87	4.390	.005
Second	83	1	6	3.33		
Third	83	1	7	3.35		
Highest	83	1	6	3.42		
<b>Total</b>	<b>332</b>	<b>1</b>	<b>7</b>	<b>3.24</b>		

**Source:** Authors' calculation from survey data.

In terms of Simpson's diversity index, all the income quartile groups have the same minimum diversity index of zero. The maximum diversity index for the lowest income group is 0.72, while for the richest group it is less at 0.68. The mean diversity index is 0.45 for the lowest group and lowest for the richest group at 0.33. This difference is statistically



significant at 1 percent level of significance. Contrary to the number of income sources as a measure of diversity, the simpson's index of diversity gives an opposite picture of diversity. While diversity index has been rising up to the second quartile, it declines sharply for the third and fourth quartiles. In fact, the lowest diversity is observed for the fourth quartile. This opposite picture reveals the deficiency of number of income sources as a measure of diversity as it fails to capture balances among them. The SDI removes this deficiency. The diversity index is low for the richer class, ie, for the third and fourth quartiles because they must have received a larger proportion of income from a few sources like nonfarm wage or self employment while receiving a negligible proportion of income from other sources. On the other hand, poorer households are receiving almost equal amount of income from different sources. This inverse relation between income status and diversity index is further confirmed by a statistically significant negative correlation between household diversity and income level. This point to the fact that while richer households maintain a few dominant income portfolios, poorer households manage a more number of income sources with small income from each source to maintain their livelihood. In other words, poorer households tend to diversify to cope with risk and uncertainty arising out of a single source of income.

**Table 8: Income Status and Diversity Index**

Income Group	Number of Households	Diversity Index			F Value	Significance
		Minimum	Maximum	Mean		
Lowest	83	0	0.72	0.45	8.10	0.000032
Second	83	0	0.74	0.49		
Third	83	0	0.77	0.41		
Fourth	83	0	0.68	0.33		
<b>Total</b>	<b>332</b>	<b>0</b>	<b>0.77</b>	<b>0.42</b>		

**Source:** Authors' calculation from survey data.

#### 4.2: Land Status and Income Diversity

Land being an important asset of rural households, we try to analyse whether there is any relation between the land holdings and the number of income sources.

**Table 9: Land Status and Number of Income Sources**

Land Group	Number of Households	Number of Income Sources			F Value	Significance
		Minimum	Maximum	Mean		
Landless	56	1		2.25	16.272	0.000
<1 hectare	159	5	6	3.37		
1-2hectres	63	1	7	3.51		
2-4hectres	39	2	6	3.56		
>4hectres	15	2	5	3.60		
<b>Total</b>	<b>332</b>	<b>1</b>	<b>7</b>	<b>3.24</b>		

**Source:** Authors' calculation from survey data.

In table 9 households are classified by size of land holdings and mean number of income sources for each land group is shown. There is a significant difference in the mean number of income sources among different categories of land class. The mean number of income source is the lowest for the landless and is rising continuously with the increase in landholding. The largest landholding group has the highest mean number of sources at 3.60. However, this increasing number of income sources with land holding need not necessarily imply that household with large land holdings are more diversified. This is clear in terms of diversity index as shown by landholding status in table 11. There is a significant difference in diversity index among landholding groups. The diversity index is the lowest for landless and highest for small

land holding group. But it declines for medium and large land groups. The reason is that while share of income from different sources is more equally distributed for small land groups, it is not so for the medium and large land groups. They receive most of income from a few sources like crop income, nonfarm wage income and remittances.

**Table10: Land Status and Diversity Index**

Land Group	Number of Households	Diversity Index			F value	Significance
		Minimum	Maximum	Mean		
Landless	56	0	0.709	0.292	7.39692	0.0000
<1hectre	159	0	0.750	0.429		
1-2 hectares	63	0	0.774	0.483		
2-4hectres	39	0	0.759	0.476		
>4hectres	15	0	0.690	0.469		
<b>Total</b>	<b>332</b>	<b>0</b>	<b>0.774</b>	<b>0.423</b>		

**Source:** Authors' calculation from survey data.

## 5. CONCLUSIONS

Based on sample study of 332 rural households in a less developed area of Assam, this study examines the nature and extent of income diversification. Certain important findings have emerged from the study. Both farming and nonfarm activities have been the common source of income for rural households with almost 86 percent and 80 percent households earning some income from farming and nonfarm sector respectively. Within the farm sector rearing of livestock and within the non farm sector self employment activities are mostly pursued by the households. However, it is the nonfarm income which has become the major source for 63 percent households contrary to 31 percent households having farm income as the major source. Of all the sources, RNF self employment activities appears to be the major source for largest number of households with 27.4 percent, followed by RNF wage employment with 25.9 percent households. Even though 86 percent households pursue farming as a source of income, it contributes only 21.72 percent to household income. The RNF sector contributes 69.42 percent and unearned income's share is 8.86 percent. The RNF wage employment is the single largest contributor to household's income with 32.74 percent, followed by RNF self employment at 22.95 percent. The share of remittances is also high at 13.75 percent. The mean income of the households participating in farm sector is far less than the mean income of households participating in nonfarm sector. All these evidences suggest unremunerative character of farming as a source of income and growing emergence of RNF sector as an alternative avenue of employment. Within the nonfarm sector CSP services followed by trade, hotels and restaurant are the most prominent sources of income.

Analysing households' income sources by farm size has revealed that crop income bears a positive relation and NF income bears a negative relation with farm size. Agricultural labour income is an important source for landless households. The share of nonfarm income is larger than the share of farm income across all categories of farm households. The RNF wage income dominates over the RNF self employed income for all land groups. Remittance is also an important source for all land class. The larger share of remittances for small and large land holders indicates that migration is a distress driven for small landholders while it is a positive choice for large land holders. Analysing income sources by income quartiles has further revealed that the poor households are tagged with less productive farm sector while the rich households are taking up more rewarding nonfarm sector. Progressively rising share of nonfarm wage income and remittance with the income groups has confirmed that poorer income class are engaged in low paid easy entry casual activities while the richer class are absorbed in difficult entry better paid regular employment activities.

The paper also measures the extent of diversification in terms of number of income sources and Simpson's diversity index for all land groups and income class. There exists a significant difference in diversity among different household groups based on land and income status.

The unremunerative character of agriculture and consequent growth of RNF sector as an alternative source of employment and income along with the existence of barriers to entry in nonfarm sector in the form of education, skill or capital investment have opened up certain key policy issues to be considered for rural development programmes. First, agriculture being the traditional source of income its lost pride has to be recovered by raising its productivity in modern line. Diversification into high value crops and livestock sector may provide employment to newly emerged educated unemployed youths. Second, there is a need to promote rural nonfarm sector by providing urban facilities in the rural area itself. It will create not only additional employment opportunities but also restrict rural urban migration driven by distress push factors. It must be kept in mind that without rapid expansion of unskilled, semiskilled labour intensive industry near the rural areas, progress towards poverty reduction and transition to modern economy cannot be achieved at a faster rate (Panagariya, 2006). Finally; policy reforms must consider the skill, capital and market constraints faced by smallholder poorer households to access to better remunerative nonfarm activities. Further research into the determinants of diversification needs to be done to highlight these issues.

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